

Claims

1. A method for controlling the size of the crystals during continuous mass crystallization, especially of ammonium sulfate, by the addition of seeding products, wherein

- the seeding product, in its parameters, is produced independently of the actual crystallization process,
- the average particle diameter of the solids of the seeding products is 0.1 to 1.0 mm and smaller than that of the desired crystalline material,
- the solids of the seeding product are produced independently of the main process of crystallization from different industrial partial flows in the specified particle size range,
- the temperature of the seeding product during the addition is as much as 40°C and preferably 10° to 30°C lower than the process temperature in the crystallizer and
- all other materials, fed and recycled into the crystallizer, are free solids.

2. A method for controlling the size of the crystals during the continuous mass crystallization of claim 1, wherein, for discontinuous seeding, the seeding product is added discontinuously in such a manner, that the proportion by weight of a selected fraction of the crystalline material in the crystallizer remains within specified limits.

3. A method for controlling the size of the crystals during the continuous mass crystallization of claim 1, wherein during continuous seeding, the solids portion of the seeding product is added in amounts of 5 to 30% by weight and preferably of 7 to 15% by weight, based on the solids discharged from the crystallizer.

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4. A method for controlling the size of the crystals during the continuous mass crystallization of one or more of claims 1 to 3 wherein the average particle diameter of the solids of the seeding product is 0.3 to 0.8 mm.

5. A method for controlling the size of the crystals during the continuous mass crystallization of one or more of the claims 1 to 4, wherein the desired particle size of the solids of the seeding product is produced by mechanical communication of the end product and/or in a separated crystallization step.

6. A method for controlling the size of the crystals during the continuous mass crystallization of one or more of the claims 1 to 5, wherein the seeding product has the same chemical composition as the end product.

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